29406
S/055/61/000/005/001/004
D205/D303

16.8000

AUTHOR: Nemytskiy, V.V.

TITLE: Some methods for a general investigation of the characteristics of the equation $\frac{dy}{dx} = \frac{Q(x,y)}{P(x,y)}$

PERIODICAL: Moscow. Universitet. Vestnik. Seriya I. Matematika, Mekhanika, no. 5, 1961, 25 - 43

TEXT: The author considers the system

$$\frac{dx}{dt} = P(x,y), \qquad \frac{dy}{dt} = Q(x,y). \tag{1}$$

assuming that it has no more than one singularity in the domain G which is being studied, and placing the origin of coordinates at the singularity. He takes some function $Z = V(x,y)$, and continuously differentiable on the whole plane $(x,y)$, $V(0,0) = 0$, belonging to one of the following types: 1) so-called elliptic functions, whose level lines $V = \text{constant}$ are simple closed li-

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Some methods for a ...

nes if $x^2 + y^2 \neq 0$: 2) so-called hyperbolic functions, whose level line V $(x,y) = 0$ consists of a finite number of branches, beginning at the origin and dividing the plane into several unlimited domains; other level lines consist of several branches without common points: 3) parabolic functions, whose lines V = constant are representations of a straight line and divide the plane into two parts. V is called Lyapunov's function with respect to (1) in G if $dV/dt = P\partial V/\partial x + Q\partial V/\partial y > 0$ or $< 0$ everywhere, $dV/dt = 0$ at singular points, V is called Lyapunov's function in a weak sense. The following theorems are established: 1) If there is a Lyapunov function in G ( containing not more than one singularity) at least in a weak sense and there are no elliptic or periodical characteristics coinciding with branches of a level line, G does not contain any elliptic or periodical characteristics. 2) If a domain G is given, filled with level lines of some normal Lyapunov function (the latter being defined as one, whose level lines do not coincide with characteristics on any segment), it contains only characteristics that are parabolic or hyperbolic with respect to it. 3) If there is a Lyapunov function in G having an additional property $dV/dt > m_p$, if $x + y \geq p$, G cannot have any improper saddle point. 4) If there is a hyperbolic Lyapunov

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function on the whole plane, all characteristics are either parabolic or hyperbolic, the number of parabolic curves is not less than that of branches of $V = 0$. If $dV/dt \geq m_R > 0$ outside of the circle of radius R around the origin, the number of parabolic domains is equal to that of the branches of $V = 0$ ani there are no improper saddle points on the characteristics The following applications are considered: 1) Equation of non-linear oscillations, 2) general stability and situation of saddle points for systems where P and Q are of the form $\alpha(x) + \beta(y)$, 3) equations of automatic control 4) disturbances in linear systems. There are 4 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: L. Marcus, Global structure of ordinary differential equations in the plane. Trans. Amer. Math. Soc. , 76, 127 - 148, 1954; L.P. La Salle, Some extensions of Lyapunov's second method. I.R.E. Trans. Circuit theory, 4, 520 - 527, 1960

SUBMITTED: June 10, 1961

Card 3/3

NEMYTSKIY, V.V.

4

LURYE, A. I., Head, Mechanics Department, Leningrad Polytechnical Institute imeni M. I. Kalinin [1961 position] - "Some applications of classic variational methods to problems of control systems"

MIKHLIN, S. G., Leningrad State University [1961 position] - "Variational methods for solving linear and nonlinear boundary value problems"

NEMYTSKIY, V. V., Director, Institute of Mathematics and Mechanics, Moscow State University [1961 position] - "Some methods of qualitative examination in the large for systems of ordinary differential equations"

SOBOLEV, S. L., Director of the Institute of Mathematics and Computation Center, Siberian Department, Academy of Sciences USSR [1961 position] - "Some new problems in the theory of partial differential equations"

report to be submitted for the Conference on Differential Equations and their Applications, Prague, Czechoslovakia, 5-11 Sep 1962.

S/055/62/000/006/002/006
D251/D308

AUTHOR: Nemytskiy, V.V.

TITLE: On the problem of the qualitative analysis on the whole by the methods of Lyapunov's function

PERIODICAL: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 6, 1962, 26-28

TEXT: The central problem of the qualitative analysis of differential equations is the analysis in the neighborhood of a periodic solution or in the neighborhood of a singular point. After reviewing the investigations of A. Poincaré, A.M. Lyapunov, I. Bendikson and G.D. Birkoff, the author points out that the second method of Lyapunov may be generalized. The opinion of N.G. Chetayev, K.P. Persidskiy and N.D. Moiseyev that the topological map of the distribution of integral curves can be investigated in the region where a positive-definite Lyapunov function exists, was confirmed by N.N. Krasovskiy whose theorem is highly praised by the author. It is probable that there are surfaces on which the derivative of

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S/055/62/000/006/002/006
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On the problem ...

Lyapunov's function becomes zero. The author mentions the development of his own ideas in the papers of Ye.A. Barbashin, P.N. Papush and S.M. Movshovich, and draws attention to the works of A.R. Efendiyev and M.B. Kudayev, to be published in the next number of Vestnik Moskovskogo Universiteta.

ASSOCIATION: Kafedra differentsial'nykh uravneniy (Department of Differential Equations)

SUBMITTED: January 19, 1962

Card 2/2

NEMYTSKII, V.V.

Conference on Differential Equations and their Applications held in Czechoslovakia; impressions of a participant in the Conference. Usp.mat.nauk 18 no.1:231-234 Ja-F '63. (MIRA 16:2)

(Czechoslovakia--Mathematics--Congresses)
(Differential equations)

NEMYTSKIY, V.V. (Moskva); MALYSHEV, Yu.V. (Moskva)

Weak structural stability of homogeneous systems. Izv. vys. ucheb. zav.; mat. no.3:133-145 '65. (MIRA 18:7)

NEMYTSKII, V.V.

Some contemporaneous problems in the qualitative theory of ordinary differential equations. Usp. mat. nauk 20 no.4:3-36 Jl-Ag '65. (MIRA 18:8)

UR/

ACC NR: AM603581 Monograph

Bylov, Boris Fedorovich; Vinograd, Robert El'yukomovich; Grobman, David Matveyevich; Nemytskiy, Victor Vladimirovich

Lyapunov's theory of exponents and its application to problems of stability (Teoriya pokazateley Lyapunova i yeye prilozheniya k voprosam ustoychivosti) Moscow. Izd-vo "Nauka", 1966. 576 p. biblio., index. 8000 copies printed.

TOPIC TAGS: mathematic method, mathematics, mathematic transformation

PURPOSE AND COVERAGE: This book is intended for students, fellows in mathematics departments, and mathematicians. It is concerned with a study of the qualitative behavior of a differential equation system. New findings relative to the stability of the equilibrium state and the asymptotic behavior of solutions are included, as well as the conditions which assure the stability of these characteristics. The book's contents can be considered a development of Lyapunov's ideas. There are 131 references, 92 of which are Soviet.

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ACC NR: AM6035815

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SUB CODE: 12/ SUBM DATE: 09Jun66/ ORIG REF: 091/ OTH REF: 039/

Card 2/2

VASIL'YEV, D.I., kand.tekhn.nauk; NEMZER, A.M., inzh.

Unballasted bridge road on reinforced concrete slabs. Sbor.trud.NII mostov no.7:5-25 '62. (MIRA 16:12)

VASIL'YEV, D.I., kand.tekhn.nauk; NEMZER, A.M., inzh.

Study of a bridge road on wooden cross beams. Sbor.trud.NII mostov no.7:26-57 '62. (MIRA 16:12)

VASIL'YEV, D.I., kand. tekhn. nauk; NEMZER, A.M., inzh.

Bridge road laid on reinforced concrete slabs without the use of ballast. Zhel. dor. transp. 46 no.1:40-42 Ja '64. (MIRA 17:8)

NEMZER, A.Yu.

Hydraulic method of laundry wringling in rubber bags. Nauch. trudy AKKH no.32:170-182 '64.

Effect of laundry wringing in rubber bags on the wear of underwear. Ibid.:183-186 (MIRA 19:1)

NOVGORODSKAYA, E.M.; NEMZER, G.A.

Etiology of acute intestinal diseases in infants. Vop.okh.mat. i det. 1 no.2:25-30 Mr-Ap '56. (MIRA 9:9)

1. Iz Instituta epidemiologii, mikrobiologii i gigiyeny imeni N.F.Filatova, Pastera i Detskoy infektsionnoy bol'nitsy imeni N.F.Filatova, Leningrad.
(INTESTINES--DISEASES) (CHILDREN--DISEASES)

NEMZER, G.A.; LOSEVA, A.G.; KUNTSMAN, Ye.S.

Materials on clinical and microbiological characteristics of Salmonella infections in children. Vop.okh.mat. i det. 1 no.2: 53-60 Mr-Ap '56. (MIRA 9:9)

1. Iz detskoy bol'nitsy imeni N.F.Filatova (glavnyy vrach Z.A.Savel'yeva) Leningrad.
(CHILDREN--DISEASES) (INTESTINES--DISEASES)

NEMZER, G.M.

Reducing the unevenness of semifinished products and yarn. Izv. vys. ucheb. zav.; tekh. teks. prom. no. 2:63-70 '61. (MIRA 14:5)

1. Ivanovskiy institut povysheniya kvalifikatsii i perepodgotovki rukovodyashchikh i inzhenerno-tekhnicheskikh rabotnikov.
(Spinning)

ABOLMASOV, Anatoliy Petrovich; MEYZER, Lev Anatol'yevich; KONSTANTINOVA, Ye.A., red.; NESTEROVA, I.N.; SOBOLEVSKAYA, Z.S., tekhn.red.

[Dictionary of Japanese geographical names; 60,000 words] Slovar' iaponskikh geograficheskikh nazvanii. 60000 slov. Moskva, Gos.izd-vo inostr.i natsional'nykh slovarei, 1959. 577 p. (MIRA 12:11)

(Japan--Names, Geographical--Dictionaries)
(Japanese language--Transliteration)

GERSHKOVICH, S.M.; SOROKINA, L.S.; NEMZER, M.P.

Reorganization of the system of infirmary care for children with goastrointestinal diseases. Vop. okh. mat. i det. 5 no. 2:69-74 Mr-Ap '60. (MIRA 13:10)

1. Iz Murmanskoy detskoy infektsionnoy bol'nitsy (glavnyy vrach M.P. Nemzer).
(DIGESTIVE ORGANS—DISEASES)
(INFANTS—CARE AND HYGIENE)

GERSHKOVICH, S.M.; NEMZER, M.P.

Characteristics of the leucocytes in children of the Murmansk Arctic Region. Pediatriia no.7:36-40 '62. (MIRA 15:12)

1. Iz Ob"yedinennoy detskoy infektsionnoy bol'nitsy Murmanska (glavnyy vrach M.P. Nemzer).
(LEUCOCYTES) (MURMANSK REGION--ARCTIC MEDICINE)

BELOGORSKIY, V.Ya.; NEMZER, M.P.

Development (differentiation) of the osseous system in children living in the Far North. Pediatriia 42 no.9:60-64 S'63. (MIRA 17:5)

1. Iz Murmanskoy ob"yedinnoy detskoy bol'nitsy (glavnyy vrach M.P. Nemzer nauchnyy rukovoditel'deystvitel'nyy chlen AMN SSSR prof. A.F Tur).

NEMZER, M.P.; BELOGORSKIY, V.Ya.

Vitamin D deficiency in pre-school children living in the Far North. Pediatriia 42 no.9:55-59 S'63. (MIRA 17:5)

1. Iz Murmanskoy ob"yedinennoy detskoy bol'nitsy (glavnyy vrach M.P. Nemzer, nauchnyy rukovoditel' - deystvitel'nyy chlen AMN SSSR prof. A.F. Tur).

NEMZER, S.

Foreign books. Teploenergetika 4 no.4:64 4p '57. (MLRA 10:5)
(Bibliography-- Power engineering)

L 03063-67

ACC NR: AP6011259 SOURCE CODE: UR/0413/66/000/006/0099/0099

AUTHORS: Birman, A. I.; Darkhovskiy, B. S.; Nomzor, S. A. 21

ORG: none

TITLE: A pneumatic multiplier-divider device. Class 42, No. 179992 [announced by Central Scientific Research Institute of Total Automation (Tsentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 99

TOPIC TAGS: pneumatic device, automatic control sytem

ABSTRACT: This Author Certificate presents a pneumatic multiplier-divider device. The device includes a pulse generator made from a three-diaphragm relay with a coil in the feedback circuit. A correcting device and two pulse-width dividers are also included in the multiplier-divider. To increase the precision, the output channel of the pulse generator is connected with the control chambers of the two pulse-width dividers. The second control chambers of the pulse-width dividers are connected with the input channel of the astatic correcting device. This correcting device is made with a five-diaphragm comparison element with a variable coil. The positive chamber of the comparison element is connected through a constant coil with the output of one relay of the divider. The effusor chamber is connected with the

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first input channel, and the second input channel is connected with the negative chamber of the correcting device. The third input channel is connected with the effusor chamber of the second relay of the divider.

SUB CODE: 13/ SUBM DATE: 19May64

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NEMZER, V.G., inzh.; KONDRATENKO, V.G., inzh.

Vibrational cleaning of a convective superheater from sludge and ash deposits. Elek. sta. 35 no.9:6-8 S '64.
(MIRA 18:1)

BODZICH, M.I.; BORISOV, B.Ya.; NEMZER, V.I.; RUSEV, M.K.

Anode-mechanical machine for cutting large ingots for investigating their structure. Mashinostroenie no.3:17 My-Je '63. (MIRA 16:7)

(Cutting machines)

POPOV, V.S., kand.tekhn.nauk; PONOMARENKO, Ye.P., inzh.; LYASHCHINSKIY, B.I., inzh.; NEMZER, V.I., inzh.; VOKSHIN, I.I., inzh.

Replacing bronze by bimetal inserts in rolling mill spindles. Stal' 22 no.3:255-256 Mr '62. (MIRA 15:3)

1. Zaporozhskiy mashinostroitel'nyy institut i zavod "Dneprospetsstal'".
(Rolling mills--Equipment and supplies)

PONOMARENKO, Ye.P.; LYASHCHINSKIY, B.I.; NEMZER, V.I.; VOKSHIN, I.I.

Bimetal bearings for rolling mill spindles. Lit. proizv. no.1:33-34 Ja '63. (MIRA 16:3)
(Rolling mills) (Bearing metals)

POPOV, V.S., kand. tekhn. nauk; PONOMARENKO, Ye.P., inzh.; LYASHCHINSKIY, B.I., inzh.; DROZDOV, N.G., inzh.; NEMZER, V.I., inzh.; VOKSHIN, I.I., inzh.

Selecting material for spindle-joint bushings of rolling mills. Vest. mashinostr. 43 no.12:29-31 D '63. (MIRA 17:8)

NENADAL, K., inz.

Effect of the supply of electric power on the economic efficiency of an enterprise. Bul EGU no. 6:14-18 '63.

Comparison of the Czechoslovak electric power plants with those abroad. Ibid.:18-23.

NENADAL, Karel

Prospects of energy balance in the world and in Czechoslovakia.
Ropa a uhlie 6 no. 6:161-167 Je '64.

1. Research Institute of Power Engineering, Prague.

Nehadál, Zdeněk. Multi-terminal resistive networks for the summation of voltages. Stroje na Zpracování Informací 2, 303–318 (1954). (Czech. Russian and English summaries)

I - P/W

80426

Z/039/60/021/07/005/037
E140/E535

9,3230

AUTHOR: Nenadál, Zdeněk, Engineer Doctor

TITLE: Filtering in Time-Variable R(t)C Circuits

PERIODICAL: Slaboproudý obzor, 1960, Vol 21, No 7, pp 398-402

ABSTRACT: The author deals with optimum filtering of useful signals of the $g(t) = a_k t^k$ type in filters composed of variable resistors and fixed capacitors. The possibility of realizing a filter for optimum filtration, i.e. minimum noise value on the filter output at the required moment if the useful signal is constant and the noise on the filter input is stationary, is shown for the case that its spectral density can be expressed by a fraction of the polynomials in $\omega^2$ and the denominator polynomial is higher by one degree than the numerator polynomial. For filtering useful signals varying in time according to the relation $g(t) = a_k t^k$ the useful signal is at first transformed into a D.C. signal by means of differentiators and is then filtered by a system of R(t)C filters. The solution of the time-dependent change of the R(t)C values does not depend either on the value of the useful signal or on the

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Filtering in Time-Variable R(t)C Circuits

value of noise. However, it does depend on the noise parameters (autocorrelation function, spectrum density) as well as on the duration of the filtering to be carried out. The author further points out that the use of differentiation at the inputs to the filters may cause a certain theoretical difficulty. The differentiator outputs could be easily blocked by noise which can increase very rapidly with successive differentiation. However, actual differentiators containing D.C.amplifiers are limited by parasitic capacitance which introduces small integrating time constants. These limit the magnitude of noise at the differentiator output. Therefore, the theoretical assumptions are only distorted for very short time intervals at the beginning of the filtering time and have negligible influence on the result of the solution.
There are 7 figures and 5 references, 3 of which are Soviet and 2 English.

SUBMITTED: April 5, 1960
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A060/A000

6.1000

AUTHOR: Nenadál, Zdeněk

TITLE: On the problem of filtering by variable-parameter filters

PERIODICAL: Referativnyy zhurnal, Matematika, no. 11, 1962, 25, abstract 11V109 (Souhrn. prací o automat. 1959, Praha, 1961, 155 - 172; Czechoslovakian; summary in English)

TEXT: The problem is considered of determining the characteristics of a filter with variable parameters which realizes the optimal filtering of a signal

$$g(t) = \sum_{0}^{s} a_k t^k$$

with respect to the sum $g(t) + n(t)$, where $n(t)$ is a stationary stochastic process with rational spectral density. The filter considered is an RC circuit with a variable resistance $R(t)$. It is demonstrated that for such a circuit the pulse transfer function has the form: $K(t, \tau) = f'(\tau)/f(t)$, where $CR(t) = f(t)/f'(t)$ and C is a constant capacitance. The integral equation for the

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On the problem of filtering by variable-parameter ....

optimal function f (t) is compatible with the analogous equation for the case of a filter with constant parameters. This has allowed the author to find the optimal characteristic and to calculate the gain in the signal-to-noise ratio obtained as result of realizing it. The possible circuits of the optimal filter are described in detail.

V.P. Yakovlev

[Abstracter's note: Complete translation]

NENADAL, Zdenek, inz., dr.

Artificial satellite guidance in the orbit. Automatizace 6 no.1: 11-14 Ja '63.

PODZIMEK, Jiri (Prague); NENADAL, Zdenek (Prague)

The AZP automatic digital recorder of shaft positions. Stroj na zprac inf 10:285-302 '64

NENADIC, Radjko

Craniotabes as an early symptom of rickets. Srp arhiv lekar 82 no.2:190-194 F '54. (KRAL 3:7)

1. Deciji dispanzer u Valjevu, upravnik dr. Radjko Nenadic. (Rad je Uredništvo primilo 17-IX-1953 god.)

(RICKETS, compl. *craniotabes)

(CRANIUM, dis. *craniotabes in rickets)

TASOVAC, Borivoje; NENADIC, Rajko; RISTIC, Jovan; JAKOVLJEV, Dusan; BOSKOVIC, Radoslav; RANITOVIC, Spasoje

Acute viral encephalitis and meningoencephalitis in Pozarevac. Epidemiology. Clinical picture. Changes in the cerebrospinal fluid and blood. Srpski arh. celok. lek. 91 no.12:1117-1127 D '63.

1. Decje odeljenje Bolnice "Dr. Voja Dulic" u Pozarevcu (Sef: prim. dr. Rajko Nenadic).

TASOVAC, Borivoje; NENADIC, Rajko; RISTIC, Jovan; JAKOVLJEV, Dusan; BOSKOVIC, Radosav; RANITOVIC, Spasoje

Acute viral encephalitis and meningoencephalitis in Pozarevac. Clinical forms, analysis of cases, prognosis, therapy. Srpski arh. celok. lek. 42 no.1:11-22 Ja '64

1. Decje odeljenje Bolnice "Dr.Voja Dulic" u Pozarevcu (Sef: prim.dr. Rajko Nenadic).

NAJDANOVIC, Borislav; NENADIC, Jovan; BOCINA, Branko

Prolonged anticoagulant therapy. Srpski arh. celok. lek. 87 no.6:515-526 Je '59.

1. Interno odeljenje bolnice "Dr. Dragisa Misovic" u Beogradu, sef: prof. dr Frano Bulic.
(ANTICOAGULANTS ther.)

TODOROVIC, K.; MENADIC, V.; BAJIC, V.

Potassium metabolism in cerebrospinal fluid in tuberculous meningitis treated with streptomycin. Glas srpske akad. nauka, odelj med. 211 no.7:173-183 1953.

1. Primljeno na VIII skupu Odeljenja med. nauka 28 V 1953 god.

(STREPTOMYCIN, eff.
on potassium in CSF in meningeal tuberc.)
(TUBERCULOSIS, MENINGEAL, CSF in
potassium, eff. of streptomycin)
(POTASSIUM, in CSF
in tuberc., meningeal, eff. of streptomycin)
(CEREBROSPINAL FLUID
potassium in meningeal tuberc., eff. of streptomycin ther.)

DIKLIC, Dragomir; FRENCIU, Josip, dr.; MILICEVIC, Milan; NENADIC, Vera; BAJIC, Verica

Diagnostic value of the bromide test in tuberculous meningitis. Srpski arh. celok. lek. 89 no.3:305-307 Mr '61.

1. Klinika za infektivne bolesti Medicinskog fakulteta Univerziteta u Beogradu. Upravnik: prof. dr Milorad Milosevic. Bolnica za plucne bolesti u Novoj Crkvi. Upravnik: dr Josip Frenciu.

(TUBERCULOSIS MENINGEAL diag) (BROMIDES csf)

KOSTIC, Andelija; PETROVIC, Milena; NENADIC, Vera

Treatment of typhoid fever and recurrences. Vojnosanit. pregl. 19 no.1:14-19 Ja '62.

1. Medicinski fakultet u Beogradu, Klinika za infektivne bolesti.

(TYPHOID ther)

TODOROVIC, K.; NENADICKA, V.; BAJICEVA, V.

Studies on the metabolism of potassium in the cerebrospinal fluid in tuberculous meningitis treated with streptomycin. Bull. Acad. serbe sc., classe med. 15 no.3:5-6 1956.

1. Examens effectues a la Clinique des Maladies Infectieuses de la Faculte de Medecine a Beograd).

(POTASSIUM, in cerebrospinal fluid,
eff. of streptomycin in tuberc. meningitis (Fr))
(CEREBROSPINAL FLUID,
potassium in tuberc. meningitis, eff. of streptomycin ther. (Fr))
(TUBERCULOSIS, MENINGEAL, cerebrospinal fluid in,
potassium, eff. of streptomycin (Fr))
(STREPTOMYCIN, effects,
on CSF potassium in tuberc. meningitis (Fr))

NEMADKEVICH, K. A.

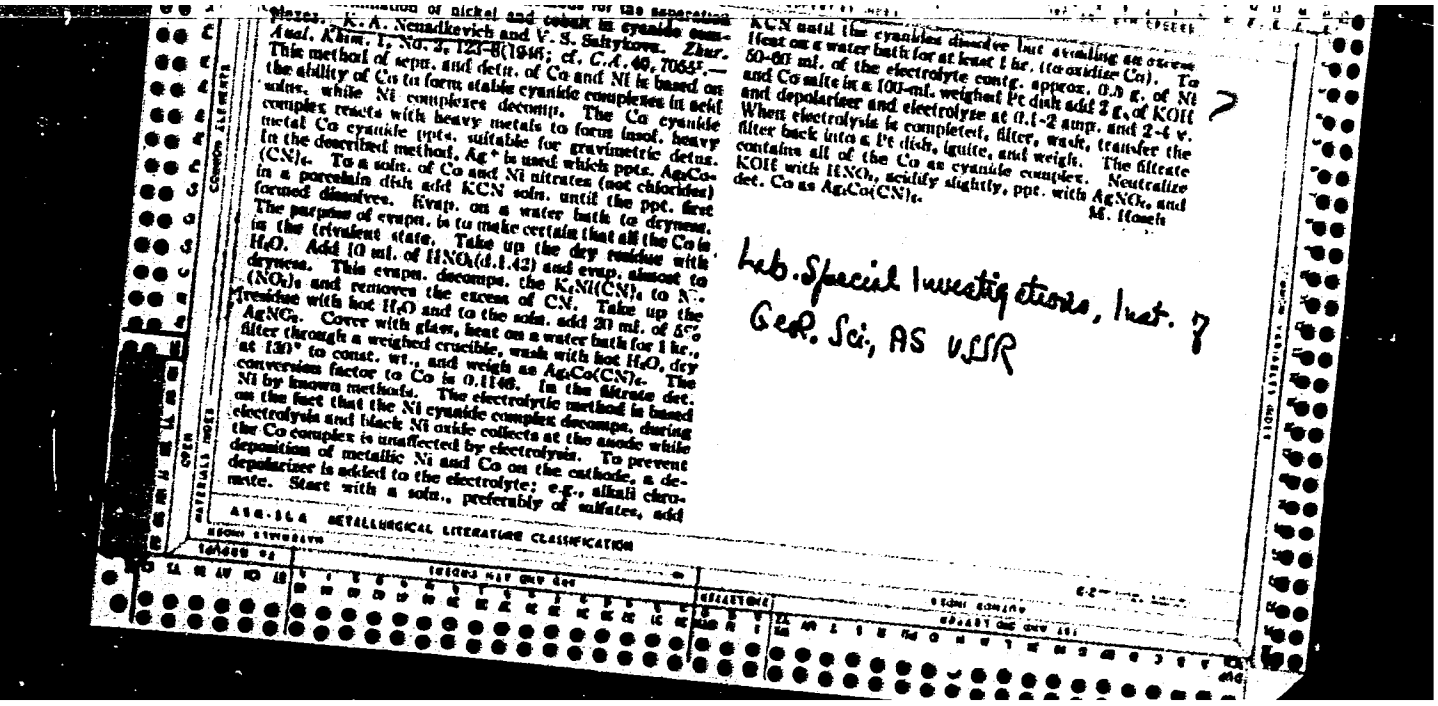
USSR/Metallurgy - Separation Methods 1945
Electrochemistry
Cobalt - Nickel

"An Electrolytic Method of Separating Nickel and Cobalt," K. A. Nemadkevich, 3 pp

"CR Acad Sci" Vol XLIX, No 1, pp. 31-33

A summary of the results of numerous experiments on an electrolytic separation method based on the greater stability of cobalt-cyanide complexes as compared with the analogous nickel salt, and of the separation procedure itself.

4T63



plexes. K. A. Nemalkevich and V. S. Safrytove. *Zhur. Anal. Khim.*, 1, No. 2, 121–8(1946); cf. *C.A.* 40, 7065⁵.—The method of sepn. and detn. of Co and Ni is based on the ability of Co to form stable cyanide complexes in acid solns., while Ni complexes decompn. The Co cyanide complex reacts with heavy metals to form insol. heavy metal Co cyanide ppts. suitable for gravimetric detns. In the described method, $Ag^+$ is used which ppts. $Ag_3Co(CN)_6$. To a soln. of Co and Ni nitrates (not chlorides) in a porcelain dish add KCN soln. until the ppt. first formed dissolves. Evap. on a water bath to dryness. The purpose of evapn. is to make certain that all the Co is in the trivalent state. Take up the dry residue with $H_2O$. Add 10 ml. of $HNO_3$(d.1.42) and evap. almost to dryness. This evapn. decomps. the $K_4Ni(CN)_6$ to $Ni(NO_3)_2$ and removes the excess of CN. Take up the residue with hot $H_2O$ and to the soln. add 20 ml. of 5% $AgNO_3$. Cover with glass, heat on a water bath for 1 hr., filter through a weighed crucible, wash with hot $H_2O$, dry at 130° to const. wt., and weigh as $Ag_3Co(CN)_6$. The conversion factor to Co is 0.1166. In the filtrate det. Ni by known methods. The electrolytic method is based on the fact that the Ni cyanide complex decomps. during electrolysis and black Ni oxide collects at the anode while the Co complex is unaffected by electrolysis. To prevent deposition of metallic Ni and Co on the cathode, a depolarizer is added to the electrolyte; e.g., alkali chromate. Start with a soln., preferably of sulfates, add KCN until the cyanides dissolve but avoiding an excess (test on a water bath for at least 1 hr. (to oxidize Co). To 50–60 ml. of the electrolyte contg. approx. 0.5 g. of Ni and Co salts in a 100-ml. weighed Pt dish add 2 g. of KOH and depolarizer and electrolyze at 0.1–2 amp. and 2–4 v. When electrolysis is completed, filter, wash, transfer the filter back into a Pt dish, ignite, and weigh. The filtrate contains all of the Co as cyanide complex. Neutralize KOH with $HNO_3$, acidify slightly, ppt. with $AgNO_3$, and det. Co as $Ag_3Co(CN)_6$.

M. Hanes

A58-164 METALLURGICAL LITERATURE CLASSIFICATION

Lab. Special Investigations, Inst. of Gen. Sci, AS USSR

BORNEMAN, I.D.

Konstantin Avtonomovich Nenadkevich, 1880-1963; obituary.
Izv. AN SSSR. Ser. geol. 29 no.4:101 Ap '64. (MIRA 17:5)

NENADKEVICH, V.

Work with youth should have our continuous attention. Prof.-tekh. obr. 21 no.12:3 D '64. (MIRA 18:2)

1. Pomashchnik direktora po kadram Pervogo Gosudarstvennogo podshipnikovogo zavoda.

NENADOVIC, LJUBOMIR P.

Putopisi. Zagreb, Zora, Drzavno izdavacko poduzece Hrvatske, 1950. 249 p. (Jugoslavenski pisci) (Description of travels. port.) CU Not in DLC. Yugoslavia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Application. Safety and Sanitation.

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5215.

Author : Nenadovic, Milija.
Inst :
Title : Concerning the Question of Individual Protection in Industry from Noxious Effects of Chemical Substances (Gases and Vapors).

Orig Pub: Tehnika, 1958, 13, No 1, Hem. ind., 12, No 1, 4-6.

Abstract: A discussion of the question of individual protection from effects of some noxious gases and vapors in the industry. Results of comparative experiments are presented with a view to determine the comparative effectiveness of the purification of air from gases and vapors using locally made and imported activated carbon. - Ya. Matlis.

Card : 1/1

NENADOVIC, M.

NENADOVIĆH, MIROSLAV.

Osnovi aerodinamickih konstrukcija ; aeroprofili. Beograd, Nauchna kniga, 1948. 2 v. (v. 1: 364 p., illus., tables, diagrs; v. 2: 608 p. of tables and diagrs.)

At head of title: Univerzitet u Beogradu.

Title tr.: Fundamentals of aerodynamic design; airfoils.

Contains data on Soviet aircraft design.

TL574.A4N4

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

NENADOVIC, MIROSLAV

Yugoslavia (430)

Technology

Osnovi aerodinamickih konstrukcija: elise. Beograd, Naucna knjiga, 1949. 450 p. (Theory of aerodynamic constructions; propellers)

East European Accessions List, Library of Congress
Vol 2, Nos 1 & 2, Jan - Feb, 1953

UNCLASSIFIED

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R001136610

NEMADOVIC, M.

The 4th European Congress of Aeronautics; Cologne, September 18-22, 1960. Glas SANU 12 no.2:261-262 '60 [publ.'62].

1. Dopisni clan Srpske akademije nauka i umetnosti, Beograd.

NENADOVIC, Miroslav, dr inz., redovni profesor ( Beograd, Kralja Milutina 51a)

Systems of linear equations as applied in engineering. Tehnika Jug 18 no.5:796-802 My '63.

1. Masinski fakultet Univerziteta u Beogradu.

JANKOV, Mirko; DAVIDOVIC, Cedica; NENADOVIC, Nenad; MISKOVIC, Dusan

Isolation of tubercle bacilli from the menstrual blood using the method of the inoculation of guinea pigs and cultivation in Löwenstein's medium. Tuberkuloza 16 no.5:409-411 S-D '64

1. Institut za tuberkulozu SR Srbije, Beograd (Direktor: prof. dr. Milic Grujic); Mikrobioloski institut Medicinskog fakulteta, Beograd (Upravnik: prof. dr. Milutin Djurisic).

NENADOVIC, V.

Reports and proposals of the commission for Technical Cadres to the 4th Plenary Session of the Union of Engineers and Technicians of Yugoslavia. p. 655. TEHNIKA (Savaz inzenjera i techicara Jugoslavije) Beograd. Vol. 11, no. 5, 1956

SOURCE: East Europe Accession List (EEAL), Library of Congress, Vol, 5, no. 11, Nov. 1956

NENADOVIC, V.

Progressive and obsolete techniques; on the occasion of the 3rd Congress of Economists of Yugoslavia, p. 549.

TEHNIKA (Savez inzenjera i tehicara Jugoslavije) Beograd, Yugoslavia.
Vol. 14, no. 4, Apr. 1959

Monthly List of East European Accession EEAI LC, Vol. 8, no. 6, June 1959
Uncla.

NENADOVIC, Vladimir, inz. (Beograd, Uzicka 16/a)

Apropos of the 4th Congress of the Association for Popularization of Technological Knowledge. Tehnika Jug 18 no.5:804m-804r My '63.

1. Potpredsednik Saveza inzenjera i tehnicara Jugoslavije, Beograd.

NENADOVICH, M.

K. A. Pushin, P. Latavul', L. I. Rykerskii and M. Nenadovich, The index of refraction of liquid mixtures. V. Systems with formic acid. P. 1573.

The index of refraction of liquid mixtures of formic acid with aniline, methyl-aniline, de-methyl-aniline, pyridine and quinoline was investigated. Complexes composed of two molecules of formic acid and one molecule of each of the amines probably exist in these mixtures.

June 28, 1947

SO: Journal of General Chemistry (USSR) 20, (90) No. 9 (1948)

NENADOVICH, M.

USSR/Chemistry - Systems, Formic Acid Sep 48
Chemistry - Refractive Index

"Refractive Index of Fluid Mixtures: V, Systems With Formic Acid," M. A. Pushin, P. Matavul', I. I. Rykovskiy, M. Nenadovich, 7 pp

"Zhur Obshch Khimii" Vol XVIII, No 9

Investigates refractive index of liquid mixtures of formic acid with aniline, methylaniline, dimethylaniline, pyridine, and quinoline. Shows it is highly probable that complex compounds, composed of two formic acid molecules and one amine molecule, exist in these mixtures. Submitted 28 Jul 47.

PA 30/49T3

22(1) SOV/3-59-3-17/48

AUTHOR: Nenadykh, I.A.

TITLE: We Continue the Discussion on Seminar Methods (Prodolzhayem razgovor o metodike seminara)

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 3, pp 34-38 (USSR)

ABSTRACT: Instructors have a different point of view on the question: what are we to understand by the "creative character" of a seminar? The general opinion, shared by A.V. Netsenko and L.L. El'yashov, instructors of the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute) [Ref 1], is that the main thing in a creative seminar is the lively, active discussion of the theme. This view seems to be somewhat one-sided. The concept of a creative character of a seminar embraces, in the author's opinion, several substantial elements, such as the form, the students' activity, interest in the discussion, high scientific level, ideological trend, and the educational influence. The author examines each of these

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We Continue the Discussion on Seminar Methods

elements. The creative character of a seminar also depends on whether the students' interest is concentrated on disclosing the scientific fundamentals of the course, and the ideological sense of the studied problems. The most important task of a seminar is to instill Communist ethics and culture in the students. An important condition is that the students be properly prepared for the seminar. This depends on a number of circumstances, but primarily on the quality of the students' independent work. Much importance is also attached to the plan of the seminar, which should be drawn up with thought and not by one person only. The purpose of the plan is to help students in their independent work, and practice has shown that an excessive number of questions raised distracts the attention. The author disagrees with Docent G.A. Malyy who does not consider it justified to compose the concluding remarks prior to

We Continue the Discussion on Seminar Methods

the seminar. That part of the remarks which is determined by the character of the theme is at any rate prepared beforehand. There are3 Soviet references.

ASSOCIATION: Saratovskiy yuridicheskiy institut imeni D.I. Kurskogo (Saratov Law Institute imeni D.I. Kurskiy)

NENAGLYADOV, Ye.; LESHCHINER, Ya.

Industrial annex of the "Pravda" Combine. Na stroi.Ros. no.3:28-31 Mr '61. (MIRA 14:6)

1. Upravlyayushchiy trestom Mosstroy No.14 (for Nenaglyadov).
2. Nachal'nik tekhnicheskogo otdela tresta Mosstroy No. 14 (for Leshchiner).

(Moscow--Printing plants)

NENAHLO, Cenek

"Angel measurement" by Berndt, Trumpold. Reviewed by Cenek Nenahlo. Stroj vyr 13 no.2:157 F '65.

TSUKERBERG, Solomon Maksimovich; ZAKHAROV, Sergey Petrovich; MINAKHOV, Boris Viktorovich; ABRAMOVA, Ella Yefimovna; GRECHKO, V.M., red.; DOMSKAYA, G.D., tekhn.red.

[Tires for increasing the roadability of automobiles] Shiny, povyshaiushchie prokhodimost' avtomobilia. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1959. 43 p. (MIRA 12:12)
(Automobiles--Tires)

TSUKERBERG, S., kand. tekhn. nauk; NENAKHOV, B., inzh.

Tires with air-pressure control. Avt. transp. 37 no.10:47-50 O '59. (MIRA 13:2)
(Automobiles--Tires)

SELEZNEV, Ivan Ivanovich; TSUKERBERG, Solomon Maksimovich; NENAKHOV, Boris Viktorovich; KOLESNIK, P.A., red.; SMIRNOVA, V.K., red. izd-va; GALAKTIONOVA, Ye.N., tekhn.red.; DONSKAYA, G.D., tekhn.red.

[Means for prolonging the life of tires] Puti uvelichaniia probega avtomobil'nykh shin. Moskva, Avtotransizdat, 1960. 47 p. (MIRA 13:9)

(Tires, Rubber--Maintenance and repair)

TSUKERBERG, S.M.; ZAKHAROV, S.P.; NENAKHOV, B.V.; ABRAMOVA, E.Ye.; ZUYEV, Yu.S., red.; KUPERMAN, F.Ye., red.; SPERANSKAYA, A.A., tekhn.red.

[High-roadability tires for motor vehicles] Shiny dlia avtomobilei povyshennoi prokhodimosti. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1960. 71 p. (MIRA 14:4)
(Motor vehicles--Tires)

TSUKERBERG, S.M.; NENAKHOV, B.V.; GORDON, R.K.

New kind of tires for trucks. Kauch. i rez. 20 no.9:34-38 S '61. (MIRA 15:2)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Motortrucks--Tires)

BIDERMAN, Vadim L'vovich; GUSLITSER, Ruvim L'vovich; ZAKHAROV, Sergey Petrovich; MENAKHOV, Boris Viktorovich; SELEZNEV, Ivan Ivanovich; TSUKERBERG, Solomon Maksimovich; BUKHIN, B.L., red.; KOGAN, V.V., tekhn. red.

[Motor-vehicle tires; design, construction, testing, and operation] Avtomobil'nye shiny i konstruktsiia, raschet, ispytanie, ekspluatatsiia. [By] V.L.Biderman i dr. Moskva, Goskhimizdat, 1963. 382 p. (MIRA 16:12)
(Motor vehicles—Tires)

TSUKERBERG, S.M.; NENAKHOV, B.V.

Testing of automobile tires. Kauch. i rez. 24 no.10:40-43 '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

NENAKHOV, Petr Zakharovich; KOMISSAROV, A.D., inzh., retsenzent; ORLOV, V.M., inzh., red.; SHISHLYKOV, Ye.S., inzh., red.; BOBROVA, Ye.N., tekhn. red.

[Manual of the baggage-weighing and issuing attendant]Spravochnik vesovshchika-razdatchika bagazha. Moskva, Transzheldorizdat, 1962. 210 p. (MIRA 15:11)
(Railroads—Baggage)

NENAKHOV, V.A.

We shall provide for uninterrupted work during winter time. Put' i put. khoz. 8 no.10:1-4 '64. (MIRA 17:12)

1. Zamestitel' nachal'nika Glavnogo upravleniya puti i sooruzheniy Ministerstva putey soobshcheniya.

NENAKHOV, V.A., inzh.

Reinforce the application of safety measures. Put' i put. khoz. 9 no.11:34-36 '65. (MIRA 18:11)

1. Zamestitel' nachal'nika Glavnogo upravleniya puti i sooruzheniy Ministerstva putey soobshcheniya.

NEHAKHOVA, Ye.M.

Declination corrections for some stars of the FK3 system.
Astron.tsir. no.202:6-7 Je '59. (MIRA 13:4)

1. Glavnaya astronomicheskaya observatoriya AN USSR.
(Stars--Observations)

NENAKHOVA, Ye.M.

Relative determinations of declinations of 64 stars in the program of the Kazan zenith telescope. Izv. Glav. astron. obser. AN URSR 3 no. 2:16-26 '61. (MIRA 14:5)

(Stars—Observations)

D'YACHKOV, N.D.; NENAROCHKIN, V.G.

Automatic machine for manufacturing polyvinyl chloride name-plates. Mashinostroitel' no.11:4 N '64 (MIRA 18:2)

NEMAROKOMOV, Aleksey Vasil'yevich; YURRE, N.A., redaktor; SHAKHOVA, L.I., redaktor lituratel'stva; KACHURINA, A.M., tekhnicheskiy redaktor

[China's forest economy] Lesnoe khoziaistvo Kitaia. [Moskva] Goslesbumizdat, 1957. 135 p. (MLRA 10:9)
(China--Forests and forestry)

NENAROKOMOV, A.V.

USSR/Forestry - Dendrology. K-3

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5870

Author : Nenarokomov, A.V.
Inst : -
Title : Kunningamiya

Orig Pub : Lesn. kh-vo, 1957, No 5, 88-90

Abstract : In this article a tree-husbandry and botanical characterisation of Cunninghamia sinensis (R.Br.) Richard is given. Cunninghamia is a fast growing species common ot the moist subtropical regions of China which attains a height of 45 meters, with a diameter of two meters, in warm regions with very high humidity. It reproduces in a number of ways: from seed, grafts, stump division, and green sprouts (the technical aspects are described). When grown from seed it is big enough for cutting in 30-40 years, from shoots in 10-20 years. In 16 years these grown from grafts give 178 cubic meters of wood, and in 36 years 340 cubic

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Card 2/2

NENAROKOMOV, E.A.; SLEPCHENKO, I.G.

Mechanism of extraction of molybdenum (VI) from hydrochloric acid solutions with diisoamyl ester of methylphosphinic acid. Zhur. neorg. khim. 8 no.12:2785-2789 D '63. (MIRA 17:9)

SOV/89-7-3-6/29

5(3)

AUTHORS: Shevchenko, V. B., Slepchenko, I. G., Shmidt, V. S., Nenarokomov, E. A.

TITLE: Extraction Properties of Di-isoamyl Esther of Methyl Phosphoric Acid

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 3, pp 236-243 (USSR)

ABSTRACT: By hitherto known methods the distribution coefficients of $HNO_3$ and uranyl nitrate in solutions of nitric acid and solutions of DAMPA (di-isoamyl esther of methyl-phosphoric acid) in petroleum were determined on the basis of the DAMPA-content in the extractive and on the $UO_2(NO_3)_2$ and $HNO_3$-content in the aqueous phase. It could be shown that, especially in the aqueous phase, small uranium concentrations can be extracted with DAMPA considerably better than with TBP (tributyl phosphate). The extraction mechanism develops according to the equation

$$H^+ + NO_3^- + DAMPA \rightleftharpoons HNO_3 DAMPA \quad (1)$$

where $HNO_3$DAMPA is a compound extracted entirely from the organic phase. The rules governing the extraction of uranium from solutions containing nitric acid by DAMPA-solutions may be

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explained by the following extraction equation:

$$UO_2^{2} + 2NO_3^{-} + 2DAMPA \rightleftarrows \left[UO_2(NO_3)_2\ (DAMPA)_2\right] \quad (2)$$

where $\left[UO_2(NO_3)_2\ (DAMPA)_2\right]$ is a compound extracted entirely from the organic phase. The equilibrium constant of reaction (1) by using 10- and 20% DAMPA-solutions is 0.30 ± 0.03 (measured value). The equilibrium constant of reaction (2) with a 20% DAMPA-solution, however, is 2540 ± 200. The values determined during the various experimental stages are represented partly by tables and partly graphically. There are 10 figures, 5 tables, and 20 references, 14 of which are Soviet.

SUBMITTED: December 11, 1958

SHEVCHENKO, V.B.; SHMIDT, V.S.; NIKAROKOMOV, K.A.; PETROV, K.A.

Extraction of nitric acid with tri-n-octylamine. Zhur. neorg. khim. 5 no.8:1852-1856 Ag '60. (MIRA 13:9)
(Nitric acid) (Octylamine)

84219
S/078/60/005/010/019/021
B004/B067

21.3200

AUTHORS: Shevchenko, V. B., Shmidt, V. S., Nenarokomov, E. A.

TITLE: Extraction of Uranium(VI) by Means of Tri-n-octylamine From Nitric Solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2354-2362

TEXT: The authors wanted to make a detailed study of the extraction of U(VI) by means of solutions of tri-n-octylamine (TOA) in o-xylene and carbon tetrachloride. In an earlier paper (Ref. 10), it had been found that in the presence of free nitric acid the entire TOA is contained in the organic phase as $TOA \cdot HNO_3$. Therefore, the authors write down the following equation for the extraction of uranium:

$TOA.HNO_{3\ org} + UO_{2\ aqu}^{2+} + 2NO_{3\ aqu}^{-} \rightleftharpoons (TOA.H)UO_2(NO_3)_{3\ org}$ (1). The dependence of the distribution coefficients on the concentration of free $TOA.HNO_3$ in the organic phase was studied at concentrations of 4.3 and

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5.4 mole/l $HNO_3$ in the aqueous phase. In this connection the fact that, according to Ref. 10, the concentration of $TOA.HNO_3$ varies in the organic phase as a result of the reaction

$H^+_{aqu} + NO^-_{3\ aqu} + TOA.HNO_{3\ org} \rightleftharpoons [TOA.HNO_3].HNO_3$ (5), was taken into account. By using o-xylene as solvent the constant $K_3$ of this reaction was found to be 0.13. Table 1 gives the values for the distribution coefficient $\alpha$, Fig. 1 shows that with $K_3 = 0.13$ the distribution coefficient $\alpha$ increases linearly with the concentration of $TOA.HNO_3$. At 4.3 mole/l $HNO_{3\ aqu}$ and 0.470 mole/l $TOA.HNO_3$, $\alpha$ is 1.81, at 5.4 mole/l $HNO_3$ it is 2.50. Fig. 2 shows $\alpha$ as a function of acidity of the aqueous phase. $\alpha$ passes a maximum at 6 - 7 mole/l $HNO_3$. The decrease of $\alpha$ with higher acid concentrations is explained by the formation of $(TOA.HNO_3).HNO_3$ and by the occurrence of $UO_2(NO_3)_3^-$ ions. In Fig. 3 $\alpha$ is represented as a function of $[H^+]$, in Fig. 4 as a function of the uranium concentration. o-xylene and carbon tetrachloride served as solvents. With very low uranium concentration in the aqueous phase $\alpha$ is almost independent

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of the concentration. It is concluded therefrom that no polymerization occurs. With high uranium concentrations $\alpha$ decreases. This is explained by the reduction of concentration of free $TOA.HNO_3$ as a result of the extraction process. In Fig. 5 the equilibrium distribution of uranium between aqueous and organic phase is shown at 0.47 mole/l $TOA.HNO_3$, dissolved in $o\text{-}C_6H_4(CH_3)_2$ or $CCl_4$. Table 2 gives the dependence of $\alpha$ on the concentration of uranium in the aqueous phase and the values for the stability constant $K_1$ of the complex $(TOA.H)UO_2(NO_3)_3$. These values were sufficiently constant only at uranium concentrations in the organic phase up to 0.10 mole/l. They amounted to 2.02±0.12 for 0.47 mole/l $TOA.HNO_3$ in $CCl_4$ and 2.88±0.11 in $o\text{-}C_6H_4(CH_3)_2$. The absorption spectrum recorded by a CΦ-2M (SF-2M) recording spectrophotometer of the organic uranium solutions in TOA is shown in Fig. 6. It considerably differs from the spectrum of uranyl nitrate, it is similar, however, to the absorption spectra of the trinitrate uranyl compounds. The optical density of $UO_2(NO_3)_2$ solutions in methylisobutylketone was measured at different

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concentrations of $TOA.HNO_3$ (Fig. 7). The optical density attained a maximum at a ratio $UO_2(NO_3)_2$ : $TOA.HNO_3$ = 1 : 1 which was also confirmed by the composition $(TOA.H)UO_2(NO_3)_3$. The authors mention a paper by V. M. Vdovenko, A. A. Lipovskiy, and M. G. Kuzina (Ref. 11). They thank L. V. Lipis for having carried out the spectrophotometric studies. There are 7 figures, 2 tables, and 19 references: 6 Soviet, 6 US, 1 British, 2 French, and 1 German.

SUBMITTED: July 6, 1959

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22992

S/186/61/003/002/002/018
E142/E435

21.3200

AUTHORS: Shevchenko, V.B., Shmidt, V.S. and Nenarokomov, E.A.

TITLE: The extraction of $U^{VI}$ and $U^{IV}$ with the di-isoamyl ether of methyl phosphoric acid from HCl solutions

PERIODICAL: Radiokhimiya, 1961, Vol.3, No.2, pp.129-136

TEXT: During the last few years di-isoamyl ether of methyl phosphoric acid (DEMPA) has been used as a satisfactory extracting agent for uranium. The authors mention briefly their previously published results on the effectiveness of the compound and on the stability of the hexavalent uranium complex, extracted with DEMPA, as compared to the stability of the complex extracted with tributyl phosphate (TBP). The present investigation deals with the reaction mechanism of extracting $U^{VI}$ and $U^{IV}$ with DEMPA from HCl solutions; the stability of the uranium compounds, extracted from the HCl solutions with the two aforementioned reagents is compared. Of each reagent 20% solutions, in carbon tetrachloride, were used. Details of the preparation of uranyl chloride ($UO_2Cl_2$) and of uranium tetrachloride ($UCl_4$) are given. Equal volumes of the 2 phases (10 ml each) were used for the extraction process which lasted 10 minutes; this time sufficed for attaining

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The extraction of $U^{VI}$ and $U^{IV}$

equilibrium. The solution was allowed to settle for 18 hours ($U^{VI}$) and 1 hour ($U^{IV}$) respectively; thereafter the phases were separated. Each phase was analysed for its uranium content and the dispersion coefficient defined as the ratio of the concentrations of the element in the organic and in the aqueous phase. During the extraction of hexavalent uranium it was found that $U^{VI}$ is extracted to an appreciable degree with a 20% solution of DEMPA in $CCl_4$ at acidities > 2N HCl. The tetravalent element is extracted satisfactorily with 20% solutions of DEMPA and TBP in $CCl_4$ only at concentrations of HCl > 4 - 5 N HCl. The complex $UO_2Cl_2 \cdot 2DEMPA$ was formed in the investigated acidity range (up to 5N HCl); tetravalent uranium forms the complexes $UCl_4 \cdot 2DEMPA$ and $UCl_4 \cdot 2TBP$. The ratios of the stability constants were calculated for the complexes $UO_2Cl_2 \cdot 2DEMPA$ and $UO_2Cl_2 \cdot 2TBP$ ($113 \pm 16$) and for the complexes $UCl_4 \cdot 2DEMPA$ and $UCl_4 \cdot 2TBP$ (approximately 300). There are 4 figures, 5 tables and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The 2 references to English language publications read as follows: K.Kraus, F.Nelson, J.Am.Chem.Soc., 72,3901 (1950); R.Betts, R.Leigh, Canad.J.Res., 28B,514 (1953).

SUBMITTED: April 30, 1960

Card 2/2

87876
S/183/60/000/005/003/007
B028/B054

155540 2209 only

AUTHORS: Kudryavtsev, G. I., Katorzhnov, N. D., Voitelev, Yu. A., Golubeva, Ye. V., Nenarokomov, L. S.

TITLE: Effect of Inorganic Salts on the Heat Resistance of Caprone Fibers

PERIODICAL: Khimicheskiye volokna, 1960, No. 5, pp. 16-20

TEXT: The present paper describes investigations carried out to increase the heat resistance of caprone fibers by additions of inorganic salts. The authors used water-soluble copper salts of nitric, citric, lactic, sulfuric, perchloric, acetic, and formic acids. 0.05 - 0.01% additions of these compounds were introduced during the polymerization of caprolactam. The authors further used 0.05-0.01% additions of water-insoluble, fatty-acid copper salts introduced into molten caprolactam. 0.25-0.5% additions of copper borate, copper phosphate, and copper chromate, as well as three-component additions, namely, copper acetate, potassium iodide, and monosubstituted sodium phosphate, were also used. It was shown that the specific viscosity reaches a maximum when adding copper stabilizers and heating the fiber to

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Effect of Inorganic Salts on the Heat Resistance of Caprone Fibers

180°C. Fibers with additions of water-soluble copper salts and three-component additions were tested for heat resistance. They were heated for 6, 24, 48, 72, and 100 hours to 150°C, and for 2, 8, 14, 24, and 36 hours to 180°C. It was shown that a simultaneous introduction of multi-component additions during fiber polymerization yielded maximum heat resistance. 0.03% copper acetate, 0.25% sodium phosphate, and 2% potassium iodide were used. This inhibited the decomposition of the fiber during heating. Resistance to tearing increased by 8% on 14 hours' heating to 180°C. After 90 hours' heating to 180°C, it had only dropped by 39.2% (as against 67% after two hours without addition). Copper salts form a chelate compound with the fiber, in which the copper is bound by secondary valencies:

ASSOCIATION: VNIIV (All-Union Scientific Research Institute of Synthetic Fibers)

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KRITSKIY, Ye.L.; NENAROKOMOV, Yu.F.; ZABIROV, M.G.

Regulating the productivity of a mill by sound measurement. Gor. zhur. no.7:37-40 Jl '56. (MLRA 9:9)

1. Mekhanobr (for Kritskiy, Nenarokomov) 2. Noril'skiy kombinat (for Zabirov).
(Crushing machinery) (Sound--Measurement)

137-58-6-11332

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 11 (USSR)

AUTHORS: Malitskiy, O.N., Nenarokomov, Yu.F.

TITLE: Experience With the Concentration of Copper-and-nickel Ores at the Noril'sk Concentrating Plant (Opyt obogashcheniya medno-nikelevykh rud na Noril'skoy obogatitel'noy fabrike)

PERIODICAL: Materialy Soveshchaniya po vopr. intensifik. i usoversh. dobychi i tekhnol. pererabotki medno-nikelevykh i nikelevykh rud, 1956 g. Moscow, Profizdat, 1957, pp 116-129

ABSTRACT: A brief description of a proposed process procedure, its shortcomings, inadequacies of the equipment and component assemblies, and elimination thereof. A description of the development of the process procedures is given; a new combined flotation procedure is presented, as are diagrams of the functioning of the hydrocyclones and of the crusher shops.

A.Sh.

1. Copper-nickel ores--Processing 2. Copper-nickel ores--Flotation
3. Industrial plants--Equipment 4. Industrial plants--Effectiveness

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SOV / 137-58-7-14040

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TITLE: A Powerful Plant for Cupro-nickel Ores (Moshchnaya fabrika dlya medno-nikelevykh rud)

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ABSTRACT: The components of a plant to be built on the basis of the Zhdanov occurrence at the Pechenganikel' Kombinat for operations preceding filtration and sintering are described. The dressing flowsheet, the designs of the structures, the units of which the buildings are comprised, the use of reactants, the repair, servicing and traffic service, and the automation of control and monitoring of the process procedure are described. A flowsheet for the coarse crushing department is provided, as are sections through the coarse crushing building, the middlings hopper, the medium and fine grinding shop, and an equipment layout flowsheet and section through the main building. 1. Industrial plants--Design 2. Industrial production--Control 3. Copper-nickel ores--Processing

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Reorganization of the Zyryanovsk Ore Dressing Plant. Obog.rud 7 no.1:24-28 '62. (MIRA 15:3)
(Zyryanovsk--Ore dressing)